

SCHEME OF INSTRUCTION & EXAMINATION

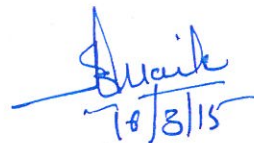
FIRST YEAR ENGINEERING

(CIVIL, MECHANICAL, ELECTRICAL & ELECTRONICS, ELECTRONICS & TELECOMMUNICATION, & COMPUTER ENGINEERING)

SEMESTER I

No.	Subject	L	T	P	Duration of Theory Exam	Marks Alloted				Total
						TH	S	P	O	
1.1	Applied Mathematics I	3	0	0	3	100	25	0	0	125
1.2	Applied Science – I (Physics & Chemistry)	4	0	2	3	100	50	0	0	150
1.3	Basic Engineering - I (Civil & Mechanical Engg.)	4	0	2	3	100	50	0	0	150
1.4	Information Technology – I	3	0	2	3	100	50	0	0	150
1.5	Engineering Graphics	2	0	4	4	100	50	0	0	150
1.6	Communication Skills	2	0	0	0	0	50	0	0	50
1.7	Workshop Practice	0	0	4	0	0	50	0	0	50
TOTAL		18	0	14	-	500	325	0	0	825

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401


7/8/15

Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

SCHEME OF INSTRUCTION & EXAMINATION

FIRST YEAR ENGINEERING

(CIVIL, MECHANICAL, ELECTRICAL & ELECTRONICS, ELECTRONICS & TELECOMMUNICATION, & COMPUTER ENGINEERING)

SEMESTER II

No.	Subject	L	T	P	Duration of Theory Exam	Marks Alloted				Total
						TH	S	P	O	
2.1	Applied Mathematics II	3	0	0	3	100	25	-	-	125
2.2	Applied Science - II (Physics & Chemistry)	4	0	2	3	100	50	-	-	150
2.3	Basic Engineering - II (Electrical & Electronics Engg.)	4	0	2	3	100	50	-	-	150
2.4	Information Technology -- II (Problem solving & Programming)	3	0	2	3	100	50	0	0	150
2.5	Engineering Mechanics	3	0	1	3	100	50	-	-	150
2.6	Social Sciences	2	0	0	0	0	50	-	-	50
2.7	Modern Workshop Practice	0	0	4	0	0	50	-	-	50
2.8	Computer Aided Drafting	0	0	2	0	0	50	-	-	50
TOTAL		19	0	13	-	500	375	-	-	875

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

Anaile
18/3/15

Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

- Annex - A

Second year of Bachelors of Engineering Degree in Information Technology. Scheme of Instruction and Examination

Semester – III

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination (marks)				
		L	T	P		Th	S	Pr	O	Total
IT 3.1	Applied Mathematics -III	3	1	-	3	100	25	-	-	125
IT 3.2	Integrated Electronics	3	1	2	3	100	25	-	-	125
IT 3.3	Logic Design	3	1	2	3	100	25	-	50	175
IT 3.4	Data Structures and Algorithms	3	1	2	3	100	25	50	-	175
IT 3.5	Introduction to Electronic Communication	3	1	2	3	100	25	-	-	125
IT 3.6	Discrete Mathematical Structures	3	1	-	3	100	25	-	-	125
	Total	18	6	8		600	150	50	50	850

Semester – IV

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination (marks)				
		L	T	P		Th	S	Pr	O	Total
IT 4.1	Numerical Methods	3	1	2	3	100	25	-	-	125
IT 4.2	Computer Organisation & Architecture	3	1	-	3	100	25	-	-	125
IT 4.3	Microprocessor & Interfacing	3	1	2	3	100	25	-	50	175
IT 4.4	Object Oriented Programming using C++	3	1	2	3	100	25	50	-	175
IT 4.5	Signals and Systems	3	1	-	3	100	25	-	-	125
IT 4.6	Electronic Instrumentation	3	1	2	3	100	25	-	-	125
	Total	18	6	8		600	150	50	50	850

L-Lectures
T-Tutorial
P-Practical

Th-Theory
S-Sessional
Pr- Practical examination
O-Oral examination

Assistant Registrar (Academic)
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 Farmagudi, Ponda-Goa-403 401.

Principal
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 Farmagudi, Ponda-Goa - 403 401

B.E. I.T.

Final year of Bachelors of Engineering Degree in Information Technology.
Scheme of Instruction and Examination
Semester – VII

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 7.1	Image Processing Analysis & Computer Vision	3	1	2	3	100	25	-	50	175
IT 7.2	Distributed Operating Systems	3	1	2	3	100	25	-	-	125
IT 7.3	Cryptography And Network Security	3	-	-	3	100	25	-	-	125
IT 7.4	Elective -I	3	1	2	3	100	25	-	50	175
IT 7.5	Elective -II	3	1	2	3	100	25	-	50	175
IT 7.6	Project	-	-	4	-	-	25	-	50	75
	Total	15	4	10	-	500	150	-	200	850

* Project Seminar

Elective -I

- A. Data Mining & Ware Houses
- B. E - Commerce
- C. Neural Networks & Fuzzy Logic
- D. Embedded System Design

Elective-II

- A. Operations Research
- B. Digital Simulation and Modelling
- C. Logic Programming and Functional Languages
- D. VLSI - Design and Technology

Semester – VIII

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr/Rep	O	Total
IT 8.1	Mobile Communications	3	1	0	3	100	25	-	50	175
IT 8.2	Elective III	3	1	2	3	100	25	-	50	175
IT 8.3	Elective IV	3	1	2	3	100	25	-	50	175
IT 8.4	Project	-	-	20	-	-	25	50	50	125
	Total	9	3	24	-	300	100	-	200	650

Elective -III

- A. Distributed Database Management Systems
- B. Web Services
- C. Advanced Computer Architecture
- D. Genetic Algorithms

Elective-IV

- A. Natural Language Processing
- B. Multimedia & Virtual Reality
- C. Software Tools for CAD/CAM
- D. Robotics

Assistant Registrar (Academic)

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Farmagudi, Ponda-Goa-403 401.

Principal

Goa College of Engineering (Govt. of Goa)
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L-Lectures
T-Tutorial
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Th-Theory

S-Sessional
Pr-Practical examination
O-Oral examination



3. Periodic Tests : Starting on Wednesdays of 8, 12 and 16th academic weeks.
4. Practical/Oral Exams : Starting on 18th Wednesday.
5. Theory Exams : Starting on 20th Wednesday.
6. Vacation : Starting on 21st Wednesday.
7. Declaration of all examination results in the 26th week.

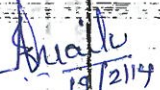
SEHEME OF INSTRUCTION & EXAMINATION


FIRST YEAR ENGINEERING

(Civil, Mechanical, Electrical & Electronics, Electronics & Telecommunication, & Computer Engineering)

SEMESTER I

No.	Subject	L	T	P	Duration of Theory Exam	Marks Alloted				Total
						TH	S	P	O	
1.1.	Applied Mathematics I	3	0	0	3	100	25	0	0	125
1.2	Applied Science I (Physics & Chemistry)	4	0	2	3	100	50	0	0	150
1.3	Basic Engineering-I (Civil & Mechanical Engg.)	4	0	2	3	100	50	0	0	150
1.4	Information Technology - I	3	0	2	3	100	50	0	0	150
1.5	Engineering Graphics	2	0	4	4	100	50	0	0	150
1.6	Communication Skills	2	0	0	0	0	50	0	0	50
1.7	Workshop Practice	0	0	4	0	0	50	0	0	50
Total		18	0	14		500	325	0	0	825


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 Farmagudi, Ponda-Goa-403 401

SCHEME OF INSTRUCTION & EXAMINATION FIRST YEAR ENGINEERING

(Civil, Mechanical, Electrical & Electronics, Electronics & Telecommunication, & Computer Engineering)

SEMESTER II

No.	Subject	L	T	P	Duration of Theory Exam	Marks Allotted				Total
						TH	S	P	O	
2.1	Applied Mathematics II	3	0	0	3	100	25	-	-	125
2.2	Applied Science II (Physics & Chemistry)	4	0	2	3	100	50	-	-	150
2.3	Basic Engineering - II (Electrical & Electronics Engg.)	4	0	2	3	100	50	-	-	150
2.4	Information Technology - II (Problem Solving & Programming)	3	0	2	3	100	50	0	0	150
2.5	Engineering Mechanics	3	0	1	3	100	50	-	-	150
2.6	Social Sciences	2	0	0	0	0	50	-	-	50
2.7	Modern Workshop Practice	0	0	4	0	0	50	-	-	50
2.8	Computer Aided Drafting	0	0	2	0	0	50	-	-	50
	TOTAL	19	0	13		500	375			875

[Signature]
19/2/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

[Signature]
Principal
Goa College of Engineering
Farmagudi, Ponda-Goa-403 401

01

Page - 1



Second year of Bachelors of Engineering Degree in Information Technology.
Scheme of Instruction and Examination

Semester - III

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination (marks)				
		L	T	P		Th	S	Pr	O	Total
II 3.1	Applied Mathematics -III	3	1	-	3	100	25	-	-	125
II 3.2	Integrated Electronics	3	1	2	3	100	25	-	-	125
II 3.3	Logic Design	3	1	2	3	100	25	-	50	175
II 3.4	Data Structures and Algorithms	3	1	2	3	100	25	50	-	175
II 3.5	Introduction to Electronic Communication	3	1	2	3	100	25	-	-	125
II 3.6	Discrete Mathematical Structures	3	1	-	3	100	25	-	-	125
Total		18	6	8	3	600	150	50	50	850

Semester - IV

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination (marks)				
		L	T	P		Th	S	Pr	O	Total
4.1	Numerical Methods	3	1	2	3	100	25	-	-	125
4.2	Computer Organisation & Architecture	3	1	-	3	100	25	-	-	125
4.3	Microprocessor & Interfacing	3	1	2	3	100	25	-	50	175
4.4	Object-Oriented Programming using C++	3	1	2	3	100	25	50	-	175
4.5	Signals and Systems	3	1	-	3	100	25	-	-	125
4.6	Electronic Instrumentation	3	1	2	3	100	25	-	-	125
Total		18	6	8	3	600	150	50	50	850

Assistant Registrar (Academic)
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Farmagudi, Ponda-Goa-403 401.

Th-Theory
S-Sessional
Pr- Practical examination
O-Oral examination

Principal
Goa College of Engineering
Farmagudi, Ponda-Goa-403 401

Tentative
Third year of Bachelors of Engineering Degree in Information Technology
Scheme of Instruction and Examination

Semester - V

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 5.1	Introduction to Data Communication	3	1	-	3	100	25	-	-	125
IT 5.2	Object Oriented Software Engineering	3	1	2	3	100	25	-	-	125
IT 5.3	Operating Systems	3	1	2	3	100	25	-	-	125
IT 5.4	Data Base Management Systems	3	1	2	3	100	25	50	-	175
IT 5.5	Digital Signal Processing	3	1	-	3	100	25	-	50	175
IT 5.6	Computer Graphics	3	1	2	3	100	25	-	-	125
	Total	18	6	8	-	600	150	50	50	850

Semester - VI

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 6.1	Principles of Economics & Management	3	1	-	3	100	25	-	-	125
IT 6.2	Management Information Systems	3	-	2	3	100	25	-	-	125
IT 6.3	Computer Networks	3	1	2	3	100	25	-	50	175
IT 6.4	Web Technologies	3	1	2	3	100	25	50	-	175
IT 6.5	Principles of Compilers	3	1	2	3	100	25	-	-	125
IT 6.6	Intelligent Agents	3	-	2	3	100	25	-	-	125
	Total	18	4	10	-	600	150	-	100	850

T - Tutorial

P - Practical

S - Sessional

Pr - Practical examination

O - Oral examination

Aravind
19/2/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

[Signature]
Principal
Goa College of Engineering
Farmagudi, Ponda-Goa-403 401

Syllabus

B.E. I.T.

43

Final year of Bachelors of Engineering Degree in Information Technology.
Scheme of Instruction and Examination
Semester - VII

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 7.1	Image Processing Analysis & Computer Vision	3	1	2	3	100	25	-	50	175
IT 7.2	Distributed Operating Systems	3	1	2	3	100	25	-	-	125
IT 7.3	Cryptography And Network Security	3	-	-	3	100	25	-	-	125
IT 7.4	Elective -I	3	1	2	3	100	25	-	50	175
IT 7.5	Elective -II	3	1	2	3	100	25	-	50	175
IT 7.6	Project	-	-	4	-	-	25	-	50	75
Total		15	4	10	-	500	150	-	200	850

* Project Seminar

Elective-I

- A. Data Mining & Ware Houses
- B. E - Commerce
- C. Neural Networks & Fuzzy Logic
- D. Embedded System Design

Elective-II

- A. Operations Research
- B. Digital Simulation and Modelling
- C. Logic Programming and Functional Languages
- D. VLSI - Design and Technology

Semester - VIII

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr/Repor	O	Total
IT 8.1	Mobile Communications	3	1	0	3	100	25	-	50	175
IT 8.2	Elective-III	3	1	2	3	100	25	-	50	175
IT 8.3	Elective-IV	3	1	2	3	100	25	-	50	175
IT 8.4	Project	-	-	20	-	-	25	50	50	125
Total		9	3	24	-	300	100	-	200	650

Elective -III

Elective-IV

- A. Distributed Database Management Systems
- B. Web Services
- C. Advanced Computer Architecture
- D. Genetic Algorithms

- A. Natural Language Processing
- B. Multimedia & Virtual Reality
- C. Software Tools for CAD/CAM
- D. Robotics

Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

Principal
Goa College of Engineering
Farmagudi, Ponda-Goa-403 401

2006 Course

FIRST YEAR ENGINEERING

(CIVIL,MECHANICAL,ELECTRICAL & ELECTRONICS & TELECOMMUNICATION, & COMPUTER ENGINEERING)

SEMESTER I

NO	SUBJECT	L	T	P	DURATION OF THEORY EXAM	Marks Alloted				Total
						Th.	S	P	O	
1.1	Applied Mathematics I	3	0	0	3	100	25	0	0	125
1.2	Applied Sciences-I (Physics & Chemistry)	4	0	2~	3	100	50	0	0	150
1.3	Basic engineering-I (Civil & Mechanical Engg.)	4	0	2~	3	100	50	0	0	150
1.4	Information Technology-I	3	0	2	3	100	50	0	0	150
1.5	Engineering Graphics	2	0	4	4	100	50	0	0	150
1.6	Communication Skills	2	0	0	0	0	50	0	0	50
1.7	Workshop Practice	0	0	4	0	0	50	0	0	50
1.8	Environmental Studies	3	0	0	3	100	25	0	0	125
Total		21	0	14	-	600	350	0	0	950

SEMESTER II

NO	SUBJECT	L	T	P	DURATION OF THEORY EXAM	Marks Alloted				Total
						Th.	S	P	O	
2.1	Applied Mathematics II	3	0	0	3	100	25	-	-	125
2.2	Applied Sciences-II (Physics & Chemistry)	4	0	2~	3	100	50	-	-	150
2.3	Basic engineering-II (Electrical & Electronics Engg.)	4	0	2~	3	100	50	-	-	150
2.4	Information Technology-II (Problem Solving and Programming)	3	0	2	3	100	50	-	-	150
2.5	Engineering Mechanics	3	0	1	3	100	50	-	-	150
2.6	Social Sciences	2	0	0	0	0	50	-	-	50
2.7	Modern Workshop Practice	0	0	4	0	0	50	-	-	50
2.8	Computer Aided Drafting	0	0	2	0	0	50	0	0	50
Total		19	0	13	-	500	375	-	-	875

Anilk
18/8/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda - 403 401

[Signature]
Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

SE I.T.

Prof. Bapat
Prof. [unclear]
[unclear]
 14/6

18/6/02

Scheme of Instruction and Examination

Semester - III

Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination (marks)				
	L	T	P		Th	S	Pr	O	Total
Applied Mathematics -III	3	1	-	3	100	25	-	-	125
Integrated Electronics	3	1	2	3	100	25	-	-	125
Logic Design	3	1	2	3	100	25	-	50	175
Data Structures and Algorithms	3	1	2	3	100	25	50	-	175
Introduction to Electronic Communication	3	1	2	3	100	25	-	-	125
Discrete Mathematical Structures	3	1	-	3	100	25	-	-	125
Total	18	6	8		600	150	50	50	850

Semester - IV

Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination (marks)				
	L	T	P		Th	S	Pr	O	Total
Numerical Methods	3	1	2	3	100	25	-	-	125
Computer Organisation & Architecture	3	1	-	3	100	25	-	-	125
Microprocessor & Interfacing	3	1	2	3	100	25	-	50	175
Object Oriented Programming using C++	3	1	2	3	100	25	50	-	175
Signals and Systems	3	1	-	3	100	25	-	-	125
Electronic Instrumentation	3	1	2	3	100	25	-	-	125
Total	18	6	8		600	150	50	50	850

Th-Theory
 S-Sessional
 Pr- Practical examination
 O-Oral examination

Principal
 Goa College of Engineering (Govt. of Goa)
 Farmagudi, Ponda-Goa-403 401

Anaide
 18/3/14
 Assistant Registrar (Academic)
 Goa College of Engineering (Govt. of Goa)
 Farmagudi, Ponda

Tentative
Third year of Bachelors of Engineering Degree in Information Technology
Scheme of Instruction and Examination

Semester – V

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 5.1	Introduction to Data Communication	3	1	-	3	100	25	-	-	125
IT 5.2	Object Oriented Software Engineering	3	1	2	3	100	25	-	-	125
IT 5.3	Operating Systems	3	1	2	3	100	25	-	-	125
IT 5.4	Data Base Management Systems	3	1	2	3	100	25	50	-	175
IT 5.5	Digital Signal Processing	3	1	-	3	100	25	-	50	175
IT 5.6	Computer Graphics	3	1	2	3	100	25	-	-	125
Total		18	6	8	-	600	150	50	50	850

Semester – VI

Subject Code	Subject	Scheme of instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 6.1	Principles of Economics & Management	3	1	-	3	100	25	-	-	125
IT 6.2	Management Information Systems	3	-	2	3	100	25	-	-	125
IT 6.3	Computer Networks	3	1	2	3	100	25	-	50	175
IT 6.4	Web Technologies	3	1	2	3	100	25	50	-	175
IT 6.5	Principles of Compilers	3	1	2	3	100	25	-	-	125
IT 6.6	Intelligent Agents	3	-	2	3	100	25	-	-	125
Total		18	4	10	-	600	150	-	100	850

L – Lectures

T – Tutorial

P – Practical

Th – Theory

S – Sessional

Pr – Practical examination

O – Oral examination



[Handwritten Signature]

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

[Handwritten Signature]
15/3/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

Ballalpur

B.E. I.T.

43

First year of Bachelors of Engineering Degree in Information Technology. Scheme of Instruction and Examination Semester – VII

Subject Code	Subject	Scheme of Instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr	O	Total
IT 7.1	Image Processing Analysis & Computer Vision	3	1	2	3	100	25	-	50	175
IT 7.2	Distributed Operating Systems	3	1	2	3	100	25	-	-	125
IT 7.3	Cryptography And Network Security	3	-	-	3	100	25	-	-	125
IT 7.4	Elective -I	3	1	2	3	100	25	-	50	175
IT 7.5	Elective -II	3	1	2	3	100	25	-	50	175
IT 7.6	Project	-	-	4	-	-	25	-	50	75
Total		15	4	10	-	500	150	-	200	850

* Project Seminar

Elective -I

- A. Data Mining & Ware Houses
- B. E - Commerce
- C. Neural Networks & Fuzzy Logic
- D. Embedded System Design

Elective-II

- A. Operations Research
- B. Digital Simulation and Modelling
- C. Logic Programming and Functional Languages
- D. VLSI - Design and Technology

Semester – VIII

Subject Code	Subject	Scheme of Instruction (hrs/Week)			Duration of Theory Paper (hrs)	Scheme of Examination marks				
		L	T	P		Th	S	Pr/Repo	O	Total
IT 8.1	Mobile Communications	3	1	0	3	100	25	-	50	175
IT 8.2	Elective III	3	1	2	3	100	25	-	50	175
IT 8.3	Elective IV	3	1	2	3	100	25	-	50	175
IT 8.4	Project	-	-	20	-	-	25	50	50	125
Total		9	3	24	-	300	100	-	200	650

Elective -III

- A. Distributed Database Management Systems
- B. Web Services
- C. Advanced Computer Architecture
- D. Genetic Algorithms

Elective-IV

- A. Natural Language Processing
- B. Multimedia & Virtual Reality
- C. Software Tools for CAD/CAM
- D. Robotics

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Farmagudi, Ponda-Goa - 403 401

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Pr- Practical examination
O-Oral examination

Anand
19/8/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

Ref No.: GU/III/Dean-Engg/07/52 dated 24/05/07
 SUBJECT: Minutes of the meeting of Chairmen of the Board of Studies in faculty of Engineering.

ANNEXURE - I

GOA UNIVERSITY

FIRST YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING (Revised in 2007-08)
 SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER I (Common for all branches of Engineering)

Sub code	Subjects	Scheme Of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th Dur (Hrs)	Marks				
						Th	S	P	O	Total
1.1	Applied Mathematics I	4	-	-	3	100	25	-	-	125
1.2	Applied Sciences - I (Physics & Chemistry)	4	-	2	3	100	50	-	-	150
1.3	Basic Civil Engineering and Engineering Mechanics.	4	-	2	3	100	25	-	-	125
1.4	Basic Electrical Engineering	3	-	2	3	100	25	-	-	125
1.5	Engineering Graphics	2	-	4	4	100	50	-	-	150
1.6	Communication Skills	3	-	-	3	100	25	-	-	125
1.7	Workshop Practice - I	-	-	4	-	-	50	-	-	50
	TOTAL	20		14		600	250			850

L : Lectures, T : Tutorials, P : Practicals.
 Th Dur : Duration of Theory Paper
 Th : Theory, S : Sessional, P : Practical, O : Oral

Handwritten signature
 29/10/14

Principal
 Goa College of Engineering (Govt. of Goa)
 Farmagudi, Ponda-Goa - 403 401

Assistant Registrar (Academic)
 Goa College of Engineering (Govt. of Goa)
 Farmagudi, Ponda-Goa-403 401.

Handwritten signature
 18/12/12
DR. J. A. LAXMINA
 PROFESSOR IN COMPUTER
 GOA COLLEGE OF ENG
 FARMAGUDI - PONDA GOA

HCEMD

R-I 2017-18

SECOND YEAR

SEMESTER III
ode

GOA UNIVERSITY

**FIRST YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING (Revised in 2007-08)
SCHEME OF INSTRUCTION AND EXAMINATION**

SEMESTER II: (Common for all branches of Engineering)

Sub code	Subjects	Scheme Of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th Dur (Hrs)	Marks				
						Th	S	P	O	Total
2.1	Applied Mathematics II	4	-	-	3	100	25	-	-	125
2.2	Applied Sciences - II (Physics & Chemistry)	4	-	2	3	100	50	-	-	150
2.3	Information Technology	4	-	2	3	100	25	-	-	125
2.4	Basic Mechanical Engineering	3	-	2	3	100	25	-	-	125
2.5	Basic Electronic Engineering	3	-	2	3	100	25	-	-	125
2.6	Environmental and Social Sciences	4	-	-	3	100	50	-	-	150
2.7	Workshop Practice - II Modern	-	-	4	-	-	50	-	-	50
	TOTAL	22		12	-	600	250	-	-	850

L : Lectures, T : Tutorials, P : Practicals.
Th. Dur. : Duration of Theory Paper
Th : Theory, S : Sessional, P : Practical, O : Oral

[Signature]
Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401
Page 2

[Signature]

Dr. J. A. LAXMINARAYANA
PROFESSOR IN COMPUTER ENGINEERING
GOA COLLEGE OF ENGINEERING
FARMAGUDI - PONDA - GOA - 403 401

[Signature]
29/10/14

Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER III

Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Applied Mathematics III	3	1	0	3	100	25	-	-	125
	Numerical Methods	3	0	2	3	100	25*	-	-	125
	Analog & Digital Circuits	3	1	2	3	100	25*	-	-	125
	Computer Organization & Architecture	3	1	2	3	100	25*	-	-	125
	Data Structures using C	3	1	2	3	100	25*	50	-	175
	System Analysis & Design	3	1	2	3	100	25*	50	-	175
	TOTAL	18	05	10	-	600	150	100	-	850

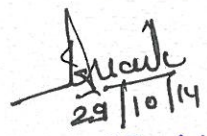
*20 marks for Internal Tests and 5 marks for internal practical test

SEMESTER IV

	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Discrete Mathematical structures	3	1	0	3	100	25	-	-	125
	Signals & Systems	3	1	0	3	100	25	-	-	125
	Computer Hardware & Troubleshooting	3	1	2	3	100	25*	-	-	125
	Microprocessors & Interfacing	3	1	2	3	100	25*	50	-	175
	Design & Analysis of Algorithms	3	1	2	3	100	25*	-	-	125
	Object Oriented Programming System	3	1	2	3	100	25*	50	-	175
	TOTAL	18	06	08	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

L-Lectures, T-Tutorials P-Practicals
Th-Dur.- Duration of Theory paper
Th-Theory, S-Sessional, P-Practical, O-Oral.


29/10/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.


Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER V

Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Introduction to Data Communication	3	1	0	3	100	25	-	-	125
	Digital Signal Processing	3	1	0	3	100	25	-	-	125
	Software Engineering	3	1	2	3	100	25*	-	-	125
	Intelligent Agents	3	1	2	3	100	25*	-	-	125
	Operating Systems	3	1	2	3	100	25*	50	-	175
	Database Management Systems	3	1	2	3	100	25*	50	-	175
	TOTAL	18	06	08	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

SEMESTER VI

	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Entrepreneurship Development	3	0	0	3	100	25	-	-	125
	Theory of Computation	3	0	2	3	100	25	-	-	125
	Computer Networks	3	1	2	3	100	25*	-	-	125
	Computer Graphics	3	1	2	3	100	25*	50	-	175
	Web Technology	3	1	2	3	100	25*	50	-	175
	Software Testing & Quality Assurance	3	1	2	3	100	25*	-	-	125
	TOTAL	18	04	10	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

L-Lectures, T-Tutorials, P-Practicals
Th.-Dur.- Duration of Theory paper
Th-Theory, S-Sessional, P-Practical, O-Oral.

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401


Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER VII

Subjects	Scheme of Instruction Hrs/Week			Th. Dur (Hrs)	Scheme of Examination				
	L	T	P		Marks				
					Th.	S	P	O	Total
Distributed Systems	3	1	2	3	100	25*	-	25	150
Principles of Compilers	3	1	2	3	100	25*	-	25	150
Mobile Computing	3	1	2	3	100	25*	-	50	175
Elective I	3	1	2	3	100	25*	-	50	175
Elective II	3	1	0	3	100	25	-	-	125
Project	-	-	4	-	-	25	-	50#	75
TOTAL	15	05	12	-	500	150	-	200	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar and Oral

Electives: A student must take One Elective from each Group.

Group I: Subjects for IT 7.4

- Data Mining & warehousing
- Genetic Algorithms
- Bio Informatics
- E-Commerce

Group II: Subjects for IT 7.5

- Geographical Information System
- Cyber laws & Computer Forensic
- Financial Engineering
- IT Business Methodology

SEMESTER VIII

Subjects	Scheme of Instruction Hrs/Week			Th. Dur (Hrs)	Scheme of Examination				
	L	T	P		Marks				
					Th.	S	P	O	Total
Image processing & Pattern Recognition	3	1	2	3	100	25	-	50	175
Computer Cryptography and Network Security	3	1	2	3	100	25	-	50	175
Elective III	3	1	2	3	100	25	-	50	175
Elective IV	3	1	2	3	100	25	-	50	175
Project	-	-	8	-	-	50	-	100#	150
TOTAL	12	04	16	-	400	150	-	300	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar, demonstration & Oral

Electives: A student must take One Elective from each Group.

Group III: Subjects for IT 8.3

- Web Services
- Operation Research
- Design Patterns & Frameworks
- Fuzzy Logic and Neural Networks

Group VI: Subjects for IT 8.4

- VLSI Design
- Embedded System Design
- System Performance & Evaluation
- Advanced Computer Architecture

[Signature]
29/10/14

Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

[Signature]
Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

KCI NO.: GU/11/DEAB-ENGG/0/154 dated 24/05/07
 SUBJECT: Minutes of the meeting of Chairmen of the Board of Studies in faculty of Engineering.

ANNEXURE - I

GOA UNIVERSITY

**FIRST YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING (Revised in 2007-08)
 SCHEME OF INSTRUCTION AND EXAMINATION**

SEMESTER I (Common for all branches of Engineering)

Sub code	Subjects	Scheme Of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
1.1	Applied Mathematics I	4	-	-	3	100	25	-	-	125
1.2	Applied Sciences I (Physics & Chemistry)	4	-	2	3	100	50	-	-	150
1.3	Basic Civil Engineering and Engineering Mechanics.	4	-	2	3	100	25	-	-	125
1.4	Basic Electrical Engineering	3	-	2	3	100	25	-	-	125
1.5	Engineering Graphics	2	-	4	4	100	50	-	-	150
1.6	Communication Skills	3	-	-	3	100	25	-	-	125
1.7	Workshop Practice - I	-	-	4	-	-	50	-	-	50
	TOTAL	20		14		600	250			850

L: Lectures, T: Tutorials, P: Practicals.
 Th. Dur.: Duration of Theory Paper
 Th: Theory, S: Sessional, P: Practical, O: Oral.

GOA UNIVERSITY

**FIRST YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING (Revised in 2007-08)
 SCHEME OF INSTRUCTION AND EXAMINATION**

SEMESTER II: (Common for all branches of Engineering)

Sub code	Subjects	Scheme Of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
2.1	Applied Mathematics II	4	-	-	3	100	25	-	-	125
2.2	Applied Sciences II (Physics & Chemistry)	4	-	2	3	100	50	-	-	150
2.3	Information Technology	4	-	2	3	100	25	-	-	125
2.4	Basic Mechanical Engineering	3	-	2	3	100	25	-	-	125
2.5	Basic Electronic Engineering	3	-	2	3	100	25	-	-	125
2.6	Environmental and Social Sciences	4	-	-	3	100	50	-	-	150
2.7	Workshop Practice II Modern	-	-	4	-	-	50	-	-	50
	TOTAL	22		12		600	250			850

L: Lectures, T: Tutorials, P: Practicals.
 Th. Dur.: Duration of Theory Paper
 Th: Theory, S: Sessional, P: Practical, O: Oral.

Signature
 6/2/15

Assistant Registrar (Academic),
 Goa College of Engineering (Govt. of Goa),
 Farmagudi, Ponda-Goa-403 401.

Principa'
 Goa College of Engineering (Govt. of Goa)
 Farmagudi, Ponda-Goa - 403 401

GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER III

Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Applied Mathematics III	3	1	0	3	100	25	-	-	125
	Numerical Methods	3	0	2	3	100	25*	-	-	125
	Analog & Digital Circuits	3	1	2	3	100	25*	-	-	125
	Computer Organization & Architecture	3	1	2	3	100	25*	-	-	125
	Data Structures using C	3	1	2	3	100	25*	50	-	175
	System Analysis & Design	3	1	2	3	100	25*	50	-	175
	TOTAL	18	05	10	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

SEMESTER IV

	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Discrete Mathematical structures	3	1	0	3	100	25	-	-	125
	Signals & Systems	3	1	0	3	100	25	-	-	125
	Computer Hardware & Troubleshooting	3	1	2	3	100	25*	-	-	125
	Microprocessors & Interfacing	3	1	2	3	100	25*	50	-	175
	Design & Analysis of Algorithms	3	1	2	3	100	25*	-	-	125
	Object Oriented Programming System	3	1	2	3	100	25*	50	-	175
	TOTAL	18	06	08	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

L-Lectures, T-Tutorials P-Practicals
Th.-Dur.- Duration of Theory paper
Th-Theory, S-Sessional, P-Practical, * O-Oral.

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

Assistant Registrar
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER V

Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Introduction to Data Communication	3	1	0	3	100	25	-	-	125
	Digital Signal Processing	3	1	0	3	100	25	-	-	125
	Software Engineering	3	1	2	3	100	25*	-	-	125
	Intelligent Agents	3	1	2	3	100	25*	-	-	125
	Operating Systems	3	1	2	3	100	25*	50	-	175
	Database Management Systems	3	1	2	3	100	25*	50	-	175
	TOTAL	18	06	08	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

SEMESTER VI

	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Entrepreneurship Development	3	0	0	3	100	25	-	-	125
	Theory of Computation	3	0	2	3	100	25	-	-	125
	Computer Networks	3	1	2	3	100	25*	-	-	125
	Computer Graphics	3	1	2	3	100	25*	50	-	175
	Web Technology	3	1	2	3	100	25*	50	-	175
	Software Testing & Quality Assurance	3	1	2	3	100	25*	-	-	125
	TOTAL	18	04	10	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

L-Lectures, T-Tutorials P-Practicals
Th.-Dur.- Duration of Theory paper
Th-Theory, S-Sessional, P-Practical, O-Oral.

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

Assistant Registrar (Acad.)
Goa College of Engineering (Govt. of U.)
Farmagudi, Ponda-Goa-403 401.

GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER VII

Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Distributed Systems	3	1	2	3	100	25*	-	25	150
	Principles of Compilers	3	1	2	3	100	25*	-	25	150
	Mobile Computing	3	1	2	3	100	25*	-	50	175
	Elective I	3	1	2	3	100	25*	-	50	175
	Elective II	3	1	0	3	100	25	-	-	125
	Project	-	-	4	-	-	25	-	50#	75
	TOTAL	15	05	12	-	500	150	-	200	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar and Oral

Electives: A student must take One Elective from each Group.

Group I: Subjects for IT 7.4

- a) Data Mining & warehousing
- b) Genetic Algorithms
- c) Bio Informatics
- d) E-Commerce

Group II: Subjects for IT 7.5

- a) Geographical Information System
- b) Cyber laws & Computer Forensic
- c) Financial Engineering
- d) IT Business Methodology

SEMESTER VIII

	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
	Image processing & Pattern Recognition	3	1	2	3	100	25	-	50	175
	Computer Cryptography and Network Security	3	1	2	3	100	25	-	50	175
	Elective III	3	1	2	3	100	25	-	50	175
	Elective IV	3	1	2	3	100	25	-	50	175
	Project	-	-	8	-	-	50	-	100#	150
	TOTAL	12	04	16	-	400	150	-	300	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar, demonstration & Oral

Electives: A student must take One Elective from each Group.

Group III: Subjects for IT 8.3

- a) Web Services
- b) Operation Research
- c) Design Patterns & Frameworks
- d) Fuzzy Logic and Neural Networks

Group VI: Subjects for IT 8.4

- a) VLSI Design
- b) Embedded System Design
- c) System Performance & Evaluation
- d) Advanced Computer Architecture

Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

Signature
6/2/15

Assistant Registrar (Academic)
Goa College of Engineering (Govt. of G.
Farmagudi, Ponda-Goa-403 401.

Ref No.: GU/III/Dean-Engg/07/52 dated 24/05/07

SUBJECT: Minutes of the meeting of Chairmen of the Board of Studies in faculty of Engineering.

ANNEXURE - I

GOA UNIVERSITY

FIRST YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING (Revised in 2007-08)
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER I (Common for all branches of Engineering)

Sub code	Subjects	Scheme Of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th Dur (Hrs)	Marks				
						Th	S	P	O	Total
1.1	Applied Mathematics I	4	-	-	3	100	25	-	-	125
1.2	Applied Sciences - I (Physics & Chemistry)	4	-	2	3	100	50	-	-	150
1.3	Basic Civil Engineering and Engineering Mechanics.	4	-	2	3	100	25	-	-	125
1.4	Basic Electrical Engineering	3	-	2	3	100	25	-	-	125
1.5	Engineering Graphics	2	-	4	4	100	50	-	-	150
1.6	Communication Skills	3	-	-	3	100	25	-	-	125
1.7	Workshop Practice - I	-	-	4	-	-	50	-	-	50
	TOTAL	20		14		600	250			850

L : Lectures, T : Tutorials, P : Practicals.

Th. Dur. : Duration of Theory Paper

Th : Theory, S : Sessional, P : Practical, O : Oral

Principal *[Signature]*
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

Page 1

[Signature]
18/12/12

[Signature]
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

HCOMD

Dr. J. A. LAXMINA
PROFESSOR IN COMPUTER
GOA COLLEGE OF ENG.
FARMAGUDI - PONDA GOA

GOA UNIVERSITY**FIRST YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING (Revised in 2007-08)
SCHEME OF INSTRUCTION AND EXAMINATION****SEMESTER II: (Common for all branches of Engineering)**

Sub code	Subjects	Scheme Of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th Dur (Hrs)	Marks				
						Th	S	P	O	Total
2.1	Applied Mathematics II	4	-	-	3	100	25	-	-	125
2.2	Applied Sciences - II (Physics & Chemistry)	4	-	2	3	100	50	-	-	150
2.3	Information Technology	4	-	2	3	100	25	-	-	125
2.4	Basic Mechanical Engineering	3	-	2	3	100	25	-	-	125
2.5	Basic Electronic Engineering	3	-	2	3	100	25	-	-	125
2.6	Environmental and Social Sciences	4	-	-	3	100	50	-	-	150
2.7	Workshop Practice - II Modern	-	-	4	-	-	50	-	-	50
	TOTAL	22		12	-	600	250	-	-	850

L : Lectures, T : Tutorials, P : Practicals.

Th. Dur. : Duration of Theory Paper

Th : Theory, S : Sessional, P : Practical, O : Oral

Page 2

Anand
13/1/14
Assistant Registrar (Academic)
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa-403 401.

J. A. Laxminarayana
Dr. J. A. LAXMINARAYANA
PROFESSOR IN COMPUTER ENGINEERING
GOA COLLEGE OF ENGINEERING
FARMAGUDI - PONDA - GOA - 403 401

Principa
Principal
Goa College of Engineering (Govt. of Goa)
Farmagudi, Ponda-Goa - 403 401

ANNEXURE I
GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXMINATION

SEMESTER III

Sub Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 3.1	Applied Mathematics III	3	1	0	3	100	25	-	-	125
IT 3.2	Numerical Methods	3	0	2	3	100	25*	-	-	125
IT 3.3	Analog & Digital Circuits	3	1	2	3	100	25*	-	-	125
IT 3.4	Computer Organization & Architecture	3	1	2	3	100	25*	-	-	125
IT 3.5	Data Structures using C	3	1	2	3	100	25*	50	-	175
IT 3.6	System Analysis & Design	3	1	2	3	100	25*	50	-	175
TOTAL		18	05	10	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

SEMESTER IV

Sub Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 4.1	Discrete Mathematical structures	3	1	0	3	100	25	-	-	125
IT 4.2	Signals & Systems	3	1	0	3	100	25	-	-	125
IT 4.3	Computer Hardware & Troubleshooting	3	1	2	3	100	25*	-	-	125
IT 4.4	Microprocessors & Interfacing	3	1	2	3	100	25*	50	-	175
IT 4.5	Design & Analysis of Algorithms	3	1	2	3	100	25*	-	-	125
IT 4.6	Object Oriented Programming System	3	1	2	3	100	25*	50	-	175
TOTAL		18	06	08	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

L-Lectures, T-Tutorials P-Practicals

Th-Dur.- Duration of Theory paper

Th-Theory, S-Sessional, P-Practical, O-Oral.

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GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER V

Sub Code	Subjects	Scheme of Instruction Hrs/Week			Th. Dur (Hrs)	Scheme of Examination				
		L	T	P		Marks				
					Th.	S	P	O	Total	
IT 5.1	Introduction to Data Communication	3	1	0	3	100	25	-	-	125
IT 5.2	Digital Signal Processing	3	1	0	3	100	25	-	-	125
IT 5.3	Software Engineering	3	1	2	3	100	25*	-	-	125
IT 5.4	Intelligent Agents	3	1	2	3	100	25*	-	-	125
IT 5.5	Operating Systems	3	1	2	3	100	25*	-	-	125
IT 5.6	Database Management Systems	3	1	2	3	100	25*	50	-	175
TOTAL		18	06	08	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

SEMESTER VI

Sub Code	Subjects	Scheme of Instruction Hrs/Week			Th. Dur (Hrs)	Scheme of Examination				
		L	T	P		Marks				
					Th.	S	P	O	Total	
IT 6.1	Entrepreneurship Development	3	0	0	3	100	25	-	-	125
IT 6.2	Theory of Computation	3	0	2	3	100	25	-	-	125
IT 6.3	Computer Networks	3	1	2	3	100	25*	-	-	125
IT 6.4	Computer Graphics	3	1	2	3	100	25*	50	-	175
IT 6.5	Web Technology	3	1	2	3	100	25*	50	-	175
IT 6.6	Software Testing & Quality Assurance	3	1	2	3	100	25*	-	-	125
TOTAL		18	04	10	-	600	150	100	-	850

*20 marks for Internal Tests and 5 marks for internal practical test

L-Lectures, T-Tutorials P-Practicals
Th-Dur.- Duration of Theory paper
Th-Theory, S-Sessional, P-Practical, O-Oral.

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GOA UNIVERSITY
SECOND YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION TECHNOLOGY
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER VII

Sub Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 7.1	Distributed Systems	3	1	2	3	100	25*	-	25	150
IT 7.2	Principles of Compilers	3	1	2	3	100	25*	-	25	150
IT 7.3	Mobile Computing	3	1	2	3	100	25*	-	50	175
IT 7.4	Elective I	3	1	2	3	100	25*	-	50	175
IT 7.5	Elective II	3	1	0	3	100	25	-	-	125
IT 7.6	Project	-	-	4	-	-	25	-	50#	75
	TOTAL	15	05	12	-	500	150	-	200	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar and Oral

Electives: A student must take One Elective from each Group.

Group I: Subjects for IT 7.4

- Data Mining & warehousing
- Genetic Algorithms
- Bio Informatics
- E-Commerce

Group II: Subjects for IT 7.5

- Geographical Information System
- Cyber laws & Computer Forensic
- Financial Engineering
- IT Business Methodology

SEMESTER VIII

Sub Code	Subjects	Scheme of Instruction Hrs/Week			Scheme of Examination					
		L	T	P	Th. Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 8.1	Image processing & Pattern Recognition	3	1	2	3	100	25	-	50	175
IT 8.2	Computer Cryptography and Network Security	3	1	2	3	100	25	-	50	175
IT 8.3	Elective III	3	1	2	3	100	25	-	50	175
IT 8.4	Elective IV	3	1	2	3	100	25	-	50	175
IT 8.5	Project	-	-	8	-	-	50	-	100#	150
	TOTAL	12	04	16	-	400	150	-	300	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar, demonstration & Oral

Electives: A student must take One Elective from each Group.

Group III: Subjects for IT 8.3

- Web Services
- Operation Research
- Design Patterns & Frameworks
- Fuzzy Logic and Neural Networks

Group VI: Subjects for IT 8.4

- VLSI Design
- Embedded System Design
- System Performance & Evaluation
- Advanced Computer Architecture

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GOA UNIVERSITY
SECOND/THIRD YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION
TECHNOLOGY ENGINEERING
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER III

Sub Code	Subject	Scheme of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th.Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 3.1	Applied Mathematics III	3	1	0	3	100	25	-	-	125
IT 3.2	Numerical Methods	3	0	2	3	100	25*	-	-	125
IT 3.3	Analog & Digital Circuits	3	1	2	3	100	25*	-	-	125
IT 3.4	Computer Organization & Architecture	3	1	2	3	100	25*	-	-	125
IT 3.5	Data Structures using C	3	1	2	3	100	25*	50	-	175
IT 3.6	System Analysis & Design	3	1	2	3	100	25*	50	-	175
TOTAL		18	05	10	-	600	150	100	-	850

*20 Marks for Internal Tests and 5 marks for internal practical test

SEMESTER IV

Sub Code	Subject	Scheme of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th.Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 4.1	Discrete Mathematical Structures	3	1	0	3	100	25	-	-	125
IT 4.2	Signals & Systems	3	1	0	3	100	25	-	-	125
IT 4.3	Computer Hardware & Troubleshooting	3	1	2	3	100	25*	-	-	125
IT 4.4	Microprocessors & Interfacing	3	1	2	3	100	25*	50	-	175
IT 4.5	Design & Analysis of Algorithms	3	1	2	3	100	25*	-	-	125
IT 4.6	Object Oriented Programming System	3	1	2	3	100	25*	50	-	175
TOTAL		18	06	08	-	600	150	100	-	850

*20 Marks for Internal Tests and 5 marks for internal practical test

L-lecture, T: Tutorials, P-Practical
 Th.Dur: Duration of the Paper
 Th: Theory, S: Sessional, P: Practical, O: Oral

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GOA UNIVERSITY
SECOND/THIRD YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION
TECHNOLOGY ENGINEERING
SCHEME OF INSTRUCTION AND EXAMINATION

SEMISTER V

Sub Code	Subject	Scheme of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th.Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 5.1	Introduction to Data Communication	3	1	0	3	100	25	-	-	125
IT 5.2	Digital Signal Processing	3	1	0	3	100	25	-	-	125
IT 5.3	Software Engineering	3	1	2	3	100	25*	-	-	125
IT 5.4	Intelligent Agents	3	1	2	3	100	25*	-	-	175
IT 5.5	Operating Systems	3	1	2	3	100	25*	50	-	175
IT 5.6	Database Management Systems	3	1	2	3	100	25*	50	-	175
TOTAL		18	06	08	-	600	150	100	-	850

*20 Marks for Internal Tests and 5 marks for internal practical test

SEMISTER VI

Sub Code	Subject	Scheme of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th.Dur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 6.1	Entrepreneurship Development	3	0	0	3	100	25	-	-	125
IT 6.2	Theory of Computation	3	0	2	3	100	25	-	-	125
IT 6.3	Computer Networks	3	1	2	3	100	25*	-	-	125
IT 6.4	Computer Graphics	3	1	2	3	100	25*	50	-	175
IT 6.5	Web Technology	3	1	2	3	100	25*	50	-	175
IT 6.6	Software Testing & Quality Assurance	3	1	2	3	100	25*	-	-	125
TOTAL		18	04	10	-	600	150	100	-	850

*20 Marks for Internal Tests and 5 marks for internal practical test

L-lecture, T: Tutorials, P-Practical
 Th.Dur: Duration of the Paper
 Th: Theory, S: Sessional, P: Practical, O: Oral

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FINAL YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION
TECHNOLOGY ENGINEERING
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER VII

Sub Code	Subject	Scheme of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th.D ur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 7.1	Distributed Systems	3	1	2	3	100	25*	-	25 50	150 175
IT 7.2	Principles of Compilers	3	1	2	3	100	25*	-	25 50	150 175
IT 7.3	Mobile Computing	3	1	2	3	100	25*	-	50 -	175 125
IT 7.4	Elective I	3	1	2	3	100	25*	-	50	175
IT 7.5	Elective II	3	1	0	3	100	25	-	-	125
IT 7.6	Project	-	-	4	-	-	25	-	50#	75
TOTAL		15	05	12	-	500	150	-	200	850

*20 marks for Internal Tests and 5 marks for internal practical test

Seminar & Oral

Electives: A student must take one Elective From each Group.

Group I: Subject for IT 7.4

- a) Data Mining & warehousing
- b) Genetic Algorithms
- c) Bio Informatics
- d) E-Commerce

Group II: Subject for IT 7.5

- a) Geographical Information System
- b) Cyber laws & Computer Forensic
- c) Financial Engineering
- d) IT Business Methodology

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FINAL YEAR OF BACHELOR'S DEGREE COURSE IN INFORMATION
TECHNOLOGY ENGINEERING
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER VIII

Sub Code	Subject	Scheme of Instruction Hrs/Week			Scheme Of Examination					
		L	T	P	Th.D ur (Hrs)	Marks				
						Th.	S	P	O	Total
IT 8.1	Image processing & Pattern Recognition	3	1	2	3	100	25	-	50	175
IT 8.2	Computer Cryptography and Network Security	3	1	2	3	100	25	-	50	175
IT 8.3	Elective III	3	1	2	3	100	25	-	50	175
IT 8.4	Elective IV	3	1	2	3	100	25	-	50	175
IT 8.5	Project	-	-	8	-	-	50	-	100#	150
TOTAL		12	04	16	-	400	150	50	300	850

*20 marks for Internal Tests and 5 marks for internal practical test

#Seminar, demonstration & Oral

Electives: A student must take one Elective From each Group.

Group III: Subject for IT 8.3

- a) Web Services
- b) Operation Research
- c) Design Patterns & Frameworks
- d) Fuzzy Logic and Neural Networks

Group VI: Subject for IT 8.5

- a) VLSI Design
- b) Embedded System Design
- c) System Performance & Evaluation
- d) Advanced Computer Architecture

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